

REMARKS

This amendment is being filed along with a Request for Continued Examination (RCE) application in response to the final Office Action having a mailing date of April 5, 2006. Claims 1 and 11 are amended as shown. New claim 22 is added. No new matter has been added. With this amendment, claims 1-22 are pending in the application.

I. Preliminary Comments

In the final Office Action, claims 1-4 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mehrotra (U.S. Patent No. 5,659,550) in view of Horiguchi (U.S. Patent No. 5,262,993). Claims 5, 9-14, and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mehrotra in view of Horiguchi '993 and in further view of Horiguchi (U.S. Patent No. 5,265,055).

Claims 1-8 and 11-21 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Campardo (U.S. Patent No. 6,947,329). It is noted that claims 7-8, 15-18, and 20-21 were rejected solely on the basis of obviousness-type double patenting and were not rejected on the basis of prior art. A terminal disclaimer along with the appropriate fee is being included with this amendment, thereby overcoming the obviousness-type double patenting rejection and placing the claims in condition for allowance.

In view of the amendments above and the arguments below, it is respectfully submitted that the rejections of the specific claims, on the basis of the cited references, have been overcome.

II. Discussion of the claims

A. Independent claim 1

Independent claim 1 in its previous form recited, *inter alia*, “electrically isolating a failed row associated with the fail state, the electrical isolating including placing the failed row in a floating state by decoupling the failed row from first and second power supplies of different

polarity.” It is respectfully submitted that the cited references of Mehrotra and Horiguchi ‘993 does not disclose, teach, or suggest these features, whether singly or in combination.

For example, the final Office Action has admitted on page 3 that Mehrotra does not disclose “placing the failed row in a floating state by decoupling the failed row from first and second power supplies of different polarity.” However, the final Office Action has nevertheless cited the Abstract of Mehrotra as disclosing a “row-level redundancy.”

It is respectfully submitted that Mehrotra’s disclosure in his Abstract and elsewhere does not meet the limitations of claim 1, whether singly or in combination with the other cited references. For example, Mehrotra’s Abstract and column 11, lines 44-47 simply describe the defective word line or the entire sector as being “mapped out.” Nothing is disclosed, taught, or suggested that the defective word line of Mehrotra is placed “floating state by decoupling the failed row from first and second power supplies of different polarity,” as recited in claim 1. For example, Mehrotra does not appear to show the first and second power supplies of different polarity (*e.g.*, positive and negative voltages are not shown) from which the failed row is decoupled to place the failed row in a floating state.

Horiguchi ‘993 does not cure the deficiencies of Mehrotra. The final Office Action has admitted on page 7 that Horiguchi ‘993 discloses a “block/mat/sector level redundancy.” As previously explained by the present applicants, Horiguchi ‘993 involves a “memory mat,” which according to column 4, lines 52-54 comprise word lines and data lines. When Horiguchi ‘993 describes not-supplying the voltages VMP and VPL to the mat 10 that is defective (*see, e.g.*, column 6, lines 8-10 of Horiguchi ‘993), he is cutting off the supply voltages to all rows in the same mat 10. Thus, rows that may not be defective also lose their power supply.

Moreover, it is clear that there is nothing disclosed, taught, or suggested that the block/mat/sector level redundancy of Horiguchi ‘993 can be applied to the row level of Mehrotra, as construed in page 7 of the final Office Action. Horiguchi ‘993 involves whole sectors/mats—he makes no mention or hint whatsoever that his method can be applied at a more granular row level or otherwise to individual row(s). In short, it would not be proper to construe Horiguchi ‘993 as being applicable to an individual failed row since he only addresses entire

mats/sectors. Therefore, Horiguchi '993 cannot be combined with the method of Mehrotra (which is lacking to begin with) to arrive at a conclusion that these two references meet the limitations of claim 1 that recite "placing the failed row in a floating state by decoupling the failed row from first and second power supplies of different polarity." Accordingly, it is believed that claim 1 in its previous form is/was allowable.

However, to facilitate prosecution, claim 1 has been nevertheless been amended to recite "selectively electrically isolating a failed row ..." There is nothing disclosed, taught, or suggested in Horiguchi '993 of selectively electrically isolating a failed row. Since the method of Horiguchi '993 involves an entire mat/sector, it is inherent and/or explicit that he does not and cannot have any type of row selectivity as recited in amended claim 1. Mehrotra further does not meet the limitations of a selectively electrically isolated failed row that is placed in a floating state by decoupling the failed row from first and second power supplies of different polarity--Mehrotra merely describes "mapping out" a defective row. Further as explained above, there is no motivation or suggestion to combine the mat/sector level technique of Horiguchi '993 to the technique of Mehrotra. Thus, claim 1 is now further allowable over the cited references.

B. Independent claim 11

Independent claim 11 in its previous form is also believed to be allowable. For example, claim 11 in its previous form recited, *inter alia*, at least one switch to "isolate a failed row during read, program or erase operations, including capability of the switches to place the failed row in a floating state by respectively decoupling the failed row from the positive and negative voltages." As previously explained above with respect to claim 1, the Horiguchi '993 applies his method to an entire mat/sector and not to the granular level of a row. Mehrotra is completely silent as to the "isolate a failed row," place the failed row in a floating state," and the various other recitations in claim 11.

However and again to facilitate prosecution, claim 11 is nevertheless amended to recite "selectively isolate a failed row..." This amendment now further distinguishes over Horiguchi '993, which is incapable of selective isolation of a failed row from the other rows in his entire mat/sector. Mehrotra further does not meet the limitations of claim 11 pertaining to

“selectively isolate a failed row during read, program or erase operations” and other recitations in claim 11. For instance, Mehrotra only speaks of “mapping out” a defective row and makes no mention whether this defective row is selectively isolated “during read, program, or erase operations.” Mehrotra further does not show or describe the positive and negative voltages recited in claim 11. Thus, claim 11 is further allowable over the cited references.

C. Dependent claims

Dependent claim 19 (which is dependent on claim 11) recites “wherein other rows in a same sector as the failed row continue to be supplied with the positive and negative voltages, while the failed row is in the floating state.” It is respectfully submitted that this feature is not disclosed, taught, or suggested by any of the cited references. In rejecting claim 19, page 4 of the final Office Action simply cited redundancy arrangements in Mehrotra and Horiguchi ‘055, but did not clearly indicate which portions of these cited references meet the specific limitations of claim 19.

Horiguchi ‘055, like Horiguchi ‘093, deals only with entire sectors/mats and does not deal with individual rows. Thus, it is clear that Horiguchi ‘055 cannot meet the limitations of claim 19 that pertain to rows in a same sector, wherein the failed row is in the floating state while the other rows continue to be supplied. Mehrotra does not provide any mention as to how his other rows, in a same sector as a defective row, are treated while the defective row is “mapped out.” Accordingly, it is believed that claim 19 is allowable.

New dependent claim 22 recites “wherein selectively electrically isolating the failed row includes selectively electrically isolating the failed row while other rows in said sector continue to be powered by said first and second power supplies.” As explained above with regards to claim 19, the cited references do not meet these limitations, whether singly or in combination. Accordingly, claim 22 is allowable.

III. Conclusion

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments

and accompanying remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 622-4900.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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